widest scale possible. They reach every community.

Wholesale assembly and distribution particularly is a key activity in the whole marketing system, since the wholesale market represents the focal point in the flow of goods from producer to consumer.

Price changes and the surpluses or shortages of specific products are often first noted in wholesale channels. The wholesaler to a certain extent regulates the market price. If more pork is offered through trade channels than consumers will take at a given price, the wholesaler promptly reduces his price bid to packinghouses; prices paid for live hogs on the one hand, and for wholesale cuts of pork on the other, will decline. Reduced prices to consumers are thus made possible, and a larger supply of pork will be absorbed. An opposite action will occur, with rising prices to producers and consumers, when pork becomes scarce.

Besides assembling a wide assortment of products, the wholesaler also may extend short-term credit to buyers. Often he assists retailers in solving merchandising problems. Sometimes wholesalers prepackage products.

Retailing is the final link in the distribution chain. Several hundred thousand retail foodstores and additional thousands of department, dry goods, and cigar stores and other specialty stores throughout the country satisfy day-to-day consumer requirements for food and other products of agricultural origin.

Retailing has undergone dynamic change in a few decades. Regional and national chainstore organizations have grown rapidly. In our automobile age, retail stores have become fewer and larger. They also have enlarged their services to buyers.

Retailers, wholesalers, processors, farmer cooperatives, and farm organizations and trade associations are engaged in merchandising farm products. Merchandising, defined by the American Marketing Association as "the planning involved in marketing

the right merchandise or service at the right place, at the right time, in the right quantities, and at the right price," involves promotional activities—attractive packaging and display, advertising, product differentiation in an effort to establish customer loyalty for brand names, competitive pricing, and personal salesmanship. A great deal of thought, effort, and money goes into this activity; without it, some of the variety, freshness, and appeal of agricultural products now available to consumers would be lacking. (Robert M. Walsh.)

## What Can It Do for Us?

Statisticians predict that the population of the United States will continue to grow rapidly. They expect more than 200 million people by 1975—one-third more than in 1950. Food supply will be a vital factor in determining where and how the people will live and how well they will live. Indeed, if the trend toward better eating of the past 25 years continues, we will require by 1975 not just 33 percent more food, but around 45 percent more—measuring the amount in value terms that reflect quality preferences and the added services that consumers want.

A glance backward points up the magnitude of the development.

The population of the United States in 1800 was 5 million persons, almost all of whom lived east of the Appalachians. About 95 percent lived on farms. The few urban communities were eastern seaport towns, whose inhabitants were fed from the produce of nearby farms. By 1900, population was more than 75 million, 30 million

of whom lived in urban communities scattered between the Atlantic and the Pacific. The population of three cities exceeded a million, and the population of 33 others exceeded 100,000.

By 1950 the population had again doubled, exceeding 150 million, of whom nearly 100 millions lived in cities. The number of people living on farms actually started downward in this half century, falling from 32.5 in 1916 to 25 million in 1950. Cities continued to grow in size and number; in 1950 there were 151 metropolitan areas of more than 100,000 population, of which 14 had more than a million inhabitants. The largest-New Yorknortheastern New Jersey—was almost 13 million. By then the railroads were supplemented by an even vaster system of highways over which fleets of trucks carried an uncounted but enormous volume of long- and short-haul traffic, including large quantities of foods and other farm products.

Whereas at the beginning of this Nation's history 9 out of 10 people lived on farms, today the number is fewer than 1 in 6. And whereas at the beginning of our history nearly every family raised its own food or bought it directly from the producer, today the number of people engaged primarily in marketing food—in getting it from the farmers to consumers approaches that engaged in producing the food in the first place. The total cost of processing and distributing the food after it leaves the farm exceeds the amount the farmers get. Food marketing is the business of some of our largest industries, and of several of our largest corporations—the meatpackers, grain dealers, flour millers, canners, chainstore companies. Even so, the combined job of producing food in the United States today and getting it to consumers requires less than one-fifth of our total productive effort.

Historically, the great increases in our food supplies have come through opening new lands to cultivation. By now this source of new production is about gone. Further increases will have to come mainly through getting more output from our present farming acreage. The experience of recent decades has demonstrated how this can be done—through technological advances in production, through further specialization, and the shifting of land from extensive to more intensive types of farming.

The marketing system, too, can help to increase food supplies. It can help first of all by adapting facilities and trade channels to the new patterns of production that will be needed. The need in the future will be to facilitate changes in the use of existing land. When farmers in an area shift to new lines of production that permit more intensive use of their resources, they will need new market facilities to handle their products and new trade channels to give them access to the national market.

The marketing system can help also to achieve fuller use of the foods that are produced. It can cut down on deterioration and spoilage of foods through the new and better methods of packing, processing, handling, and storage. It can find byproduct uses for food materials that now are wasted.

The marketing system itself will have greatly increased volumes to distribute, with increasing needs and opportunities for improved methods of operation, for shortcuts that eliminate unnecessary handling, for improved design of facilities, for ways to mechanize operations both to speed them up and to reduce the labor costs involved, for management methods that overcome lost motion and prevent wrong decisions, for improvements in the organization of markets to facilitate smoother and faster flow of products through trade channels.

The transportation system obviously will have a greatly increased volume. It will have to carry not only the additional food, but all the other products needed for a larger population. Historically, its task in expanding food supply has been the extension,

first of river and canal lines, then of railroads, more recently of motortruck highways and airlines to open up new territories to production. The need of the future will be instead to haul a greater volume over existing routes. Traffic congestion on highways and in some instances on railroads is already a recognized problem. A great deal of ingenuity and imagination will be needed to overcome it. Fully as much effort will need to be directed toward improving local hauling within metropolitan areas as toward improving over-the-road movement. If the present shift of city people to the suburbs continues, more transportation and a more complex pattern of transportation will be required to distribute the foods throughout the spreading residential areas.

Communications facilities will face a similar problem. Our free-enterprise system works through millions of daily decisions of independent farmers, businessmen, and consumers throughout the country—decisions to buy or sell, to ship, process, or store the countless products of our farms. Our whole economy is a demonstration of the efficiency of such a system. But in order to achieve this efficiency, the thousands of independent operators must have continuously available information on which to base intelligent decisions. And each one must have quick and ready access to all the others with whom he must deal in translating his decisions into action. This means highly complex and highly organized communications.

We have developed effective systems for this in the United States. But here again the great increase in traffic will require continuing application of ingenuity and imagination in devising quicker, simpler, more effective ways of assembling, summarizing, and disseminating market information, in organizing buying and selling more efficiently, in facilitating contact between operators at distant points in the marketing system. We will need, for example, to improve and extend

the use of the grading systems that provide a common, precise language of trade. We will need to devise more compact systems of shorthand notation that permit packing more information in brief messages. New arrangements for direct dialing of long-distance telephone calls illustrate a type of improvement for speeding up communications.

We can also anticipate a great increase in the role of processing and storage in the food-supply system of the future. Processing and storage permit fuller use of the production possibilities of areas with seasonal disadvantages. They also reduce the burden upon transportation, partly by reducing the bulk of commodities that must be shipped, partly by spreading the shipping season out over the year instead of having it concentrated at harvesttime. Lack of storage facilities has hampered the marketing of various commodities from time to time in recent years.

Meanwhile the frozen-food industry furnishes a current example of how new methods of processing and distribution can draw upon new producing areas, expand year-around market outlets, and offer consumers both a better product and greater convenience.

The latter point can be generalized. With changing patterns of living and continuing increases in consumer incomes, there will be opportunities throughout the marketing system for developing additional services that will contribute to higher living standards. Recent history is full of developments of this kind—improvements in packaging, putting up foods in readyto-use form, partly or wholly precooked products.

Food distribution over the next 25 years may not, on the whole, be a spectacular industry like television, although it will likely include isolated spectacular developments, like that of frozen concentrated orange juice over the past few years. It will, however, be an expanding industry. It will face many difficult responsibilities if it

is to fulfill its role of furnishing food to an increasing population with rising standards of consumption. Certainly it will be an industry in which there is abundant opportunity for ingenuity and initiative. (*Herman Southworth*.)

## How Efficient Is Our Marketing System?

Engineers say that no machine can be 100 percent efficient. There is always some friction, some loss of power. Any machine produces less energy than it consumes.

But the laws of economics differ from the laws of physics, although it is true that the economist must reckon with friction and waste. We expect our marketing machine to have an efficiency of more than 100 percent—we expect the finished goods and services to be worth more to the consumer than the value of the raw farm products plus the value of the labor and capital used to process, transport, and distribute them. Our standard is not physical energy—it is value, whether measured in money terms or in such broader terms as "satisfaction" or "utility."

From that viewpoint, no one would doubt that processing, transportation, and trade add greatly to the value of farm products. A billion-bushel crop of wheat would not be worth much if it were stored permanently on the farm. But the flour and bread made from our wheat are extremely valuable when they are made available to consumers at home and abroad. Who would doubt that the value of wheat is raised by more than the cost of the materials, labor, and capital that are used in marketing?

Why, then, do farmers and consum-

ers ask, "Is our marketing efficient?" What do they mean by the question? Probably they want to know at least three things: Is our marketing machinery too complicated? Is technological progress in marketing keeping pace with that in farming and in business? Is it possible to reduce waste, overlapping and duplication, and monopolistic practices so that the job can be done at less expense?

We do not have the full answer to the three questions. But we shall discuss them as well as we can on the basis of information at hand.

FIRST, OUR MARKETING machinery probably is not too complicated. It takes elaborate machinery to do the job efficiently in the United States today. Simple and direct arrangements, such as roadside stands, parcel post, door-to-door peddling, and retail farmers' markets have a minor place in our modern economy. As farming becomes specialized, and especially as distant producing areas are developed, becomes impracticable for most farmers to deal directly with consumers. So the modern farmer usually sells to a local buyer. Then the farmer loses track of the goods he produced. He knows that they are commonly resold many times and that many middlemen are involved.

This may seem complicated and mysterious. It is complicated, but it need not be mysterious. A watch is a complicated mechanism, but there is no great mystery about it. Few would object because a modern watch is more complicated than an hourglass or than a sundial—at least not if the watch runs well. Nor should we object to a complicated system of marketing if the parts are well coordinated.

The parts of the agricultural marketing system include about 10 million workers, almost 100 thousand processing plants, more than 200 thousand miles of railroads, 3 million miles of highways, 90 thousand wholesale establishments, and 1 million retail stores, restaurants, and eating places.